DOCUMENT RESUME

ED 339 751 TM 017 684

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TITLE The Detection of the Fake Good Response Set on the MMPI-2.
PUB DATE Nov 91
NOTE 13p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (20th, Lexington, KY, November 12-15, 1991).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Chi Square; Discriminant Analysis; Higher Education; *Personality Measures; *Psychological Testing; Regression (Statistics); Response Style (Tests); Sex Differences; *Testing Problems; Test Validity; *Undergraduate Students
IDENTIFIERS *Faking (Testing); *Minnesota Multiphasic Personality Inventory

ABSTRACT

Patterns of responses to the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) that typify deliberate deception of others (faking good) were studied using 100 undergraduates at the University of Alabama (Tuscaloosa) who were given extra course credit for participation in the study. Females constituted 73% of the final subject pool. Each subject was given the MMPI-2 test booklet and two sets of answer sheets. Subjects were asked to complete the MMPI-2 anonymously, first trying to impress a potential employer, and then answering honestly with first reactions. Discriminant analysis and regression identified 83% of the normal MMPI-2 answers and 78% of fake good response sheets. Chi square and additional analyses resulted in a new scale that identified 89% of normal responses and 90% of fake good responses. Gender was not found to be a significant variable. Cross-validation with an additional 66 subjects confirmed these results. The study demonstrates a new method of assessing a deliberate fake good response set. Two tables of study findings and a 12-item list of references are included. (SLD)

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The Detection of the Fake Good Response Set on the MMPI-2

Mid-South Educational Research Association Convention

November 14, 1991

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Early in the history of the MMPI, it was deemed important to be able to detect the test taking attitudes of faking good and faking bad (Meehl and Hathaway, 1946). In this early MMPI research, fake good was synonymous with defensiveness. This research resulted in the creation of two of the original validity scales, the L and K scales. These validity measures of defensiveness were a measure of self-deception rather than the deliberate deception of others. While it is possible deception is a unitary concept, and that one who tends to deceive himself is also predisposed to deceive others, the focus of this research is the patterns of responding to the MMPI-2 which typify deliberate deception of others.

Since Block's seminal publication on response set (Block, 1965) attempts to study response set on the MMPI have become more common. Past research in this mold have included the F-K index and Dissimulation scale (Gough, 1947, 1950, 1954) the TR index (Dahlstrom et al, 1972), and the Carelessness scale (Greene, 1978). While these scales have had varying success in detecting fake bad, they have all been ineffective in

detecting fake good response sets (Grayson & Olinger, 1957; Johnson et al, 1977; Anthony, 1971; Greene, 1979).

Given the common uses of the MMPI such as employment screening, prison evaluations, and psychiatric discharge examinations, it is reasonable to assume that individuals taking the inventory would have a vested interest in the results obtained and might be predisposed to deliberately lie to appear better adjusted than they actually are. The traditional validity scales are sensitive to the detection of coloring responses to make a positive impression. However, deliberate deception is a different response set than either defensiveness or a moderate social desirability response set and the existing validity indicators in both the MMPI-1 or MMPI-2 have had limited success in detecting the fake good response set. One study found that one third of college students asked to simulate exaggerated good adjustment could escape detection through validity indicators (Lanyon, 1977).

METHOD

Subjects

A group of 100 coerced volunteer undergraduate college students at the University of Alabama were recruited for participation in the study. The students were in classes in Educational Psychology and Educational Statistics and were given extra credit for participation. Approximately 60 percent of the initial pool of volunteers was female. Females had a higher project completion rate and constituted 73 percent of the final subject pool.

Procedure

Each subject was given a packet of instructions, an MMPI test booklet, and two sets of differentially colored answer sheets. The packet was to be taken home and responded to in one's own time frame. However, packets were due back within one week of distribution. Each subject was asked to first take the MMPI-2 anonymously according to the following instructions:

> You have applied for a job for which you want to be hired very badly. You are one of three finalists for the job. The company can't decide between the three of you so they ask all of you to take this test. They explain that the job will go to the best adjusted, most mentally healthy candidate. Answer the test in such a

way as to guarantee that they hire you.

Subjects were then requested to retake the MMPI-2 honestly with their first reaction, not based on the above character description. When completed, the subjects returned the two sets of answer sheets and a brief demographic questionaire indicating the sex, age, and race of the subject.

Research Hypotheses

1. The scores of the individual validity indicators of the MMPI-2 (L, F, K, F-K, Sum True, FB, TRIN, and VRIN) will be significantly related to whether or not an MMPI profile is fake good or normal.

2. A multiple regression of the above validity indicators of the MMPI-2 will have a higher correlation with response set than the individual scales as well as a superior hit rate of identifying normal versus fake good protocols.

3. A new scale to identify the fake good response set will outperform the existing validity scales either singly or in combination both in percentage of variance explained and hit rate.

RESULTS

A discriminant analysis was conducted with each of

the MMPI-2 validity indicators yielding the following results:

SCALE	F	p	R^2
L	113.89	.0001	.37
K	55.45	.0001	.22
F-K	34.81	.0001	.15
ACQ	24.86	.0001	.11
TRIN	11.92	.0007	.06
F	10.03	.0018	.05
VRIN	8.46	.0041	.04
FB	3.16	.0768	.02

ACQ=total # of true responses

A regression analysis yielded the following cut scores as most accurate for each of the validity indices in differentiating the normal from fake good response set. The percentage of normal and fake good subjects correctly identified using this cut score is indicated as well as the overall percentage hit rate.

Fake Good Cut Score	Percent Normal Correct	Percent Fake Good Correct	Overall Percent Correct
L > 7	76%	83%	79.5%
F-K <-11	58%	84%	72.0%
K > 17	71%	72%	71.5%
ACQ <223	59%	77%	68.0%
TRIN < 2	51%	82%	66.5%
F < 6	42%	86%	64.0%
FB < 4	36%	82%	59.0%
VRIN < 6	52%	64%	58.0%

Multiple regression analysis of the above validity indices using the stepwise procedure indicates that the best parsimonious solution to the identification of fake good is the regression equation:

$$Y' = 1.0797 + .0693\ L - .0115\ F$$

using raw scores for L and F and a Y' score greater than or equal to 1.50 indicative of fake good. This multiple regression equation yielded an $F_{(2,197)} = 64.79$ ($p=.0001$, $R^2 = .40$). Using this formula 83% of the normal MMPIs were correctly identified as were 78% of the fake good, for an overall hit rate of 80.5%.

In an effort to see if this identification hit rate could be improved, a Yates corrected chi-square was run on each of the 567 MMPI items to determine which items discriminated between fake good and normal response set. Using an alpha of .01, 230 items were found to so discriminate. Increasing the alpha to .001 yielded 163 items, and alpha of .0005 still produced 140 discriminating items. In an effort to restrict the item pool to a workable number for a scale, a threshold of $X^2 > 20$ was employed which created an item pool of 61 items. Part to whole correlations were computed for each item so that any items detracting from the whole

scale reliability could be deleted. Only one item so qualified for deletion leaving a 60 item scale with a part to whole reliability of .97. This scale consists of True responses to items 1, 3, 49, 63, 152, 173, 174, 184, 199, 211, 239, 362, and 496 as well as False responses to items 21, 23, 29, 31, 38, 41, 48, 51, 55, 73, 77, 82, 87, 93, 107, 116, 123, 130, 136, 146, 161, 190, 196, 203, 213, 232, 233, 256, 273, 275, 279, 289, 326, 328, 331, 339, 409, 419, 442, 461, 464, 475, 482, 509, 533, 542, and 566.

A discriminant analysis was conducted with this scale, called FkGd, and produced an $F_{(1,198)} = 240.88$ ($p=.0001$, $R^2 = .55$). Employing a cut score of FkGd > 41 indicative of faking good, the hit rate for the normal response set was 85%, the hit rate for the fake good response set was 89%, for an overall hit rate of 87%. This hit rate was further enhanced through multiple regression of validity indices including FkGd. The best 3 factor model derived was:

$$Y' = .038\ \text{FkGd} + .0034\ \text{ACQ} - .016\ \text{K} - .536$$

This formula yielded an $F_{(3,196)} = 107.98$ ($p=.0001$, $R^2 = .62$). Using this equation the overall hit rate was 89.5% (89% - normal response set, 90% - fake good

response set).

Because of the large over-representation of females in the sample, a t-test was conducted of gender differences in FkGd scores, and gender was not found to be a significant variable.

A cross-validation of both the new scale and the multiple regression equation employing the new scale was conducted. This cross-validation consisted of an additional 66 subjects using procedures identical to those employed with the first 100 subjects. The results of the cross-validation demonstrated minimal shrinkage. The FkGd yielded an $F_{(1,130)} = 159.40$ ($p=.0001$) with an R^2 of .55, identical to the R^2 of the original sample. Again employing the cut score of FkGd > 41 as indicative of faking good, the hit rate for the normal response set dropped from 85 to 80%, while the hit rate for the fake good response set remained at 89%, for an overall hit rate of 84.5% compared to 87% for the original sample. The replication of the multiple regression equation employing the FkGd scale accurately identified 83% of the normal protocols and 89% of the fake good for an overall hit rate of 86%. For the cross-validation sample, this multiple

regression equation had an R^2 of .57.

DISCUSSION

The present study shows that while the L scale can be useful in assessing whether or not an MMPI-2 was taken with a deliberate fake good response set, the new FkGd scale was superior for these samples. A cut score > 41 successfully differentiated 87% (84.5% on cross-validation) of the protocols, and when used in conjunction with the number of true responses and the K raw score through a multiple regression equation this hit rate was increased to 89.5% (86% on cross-validation).

Rather than a counter balanced design, it was decided to administer the fake good MMPI-2 before the normal MMPI-2 for all subjects in the study. The rationale for not counterbalancing the design was the grounding of the research. In actual clinical use when an individual produces a fake good MMPI-2 it is almost always on the first administration rather than a retesting following a normal administration. Hence, this model was followed in this research to better reflect clinical practice.

A subsidiary study will be conducted to determine

if order of presentation of the response set is related to the obtained scores. An analysis of the factor structure of the FkGd scale will also be conducted to determine the usefulness of exploring subscales for the FkGd scale.

This study strongly suggests that the FkGd scale has potential to increase the ability to successfully determine whether or not an MMPI-2 protocol was taken normally or with the deliberate intention to fake good.

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